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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Darby & Darby
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New York, NY 10022-7513

EXAMINER

WARE, CICELY Q

ART UNIT	PAPER NUMBER
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2634

DATE MAILED: 03/14/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/830,332	Applicant(s) BESSETTE ET AL.	
	Examiner Cicely Ware	Art Unit 2634	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 December 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 61-128 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 67-120 and 122-128 is/are allowed.
- 6) ☒ Claim(s) 61-66 and 121 is/are rejected.
- 7) ☒ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 December 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 12/13/2005 have been fully considered but they are not persuasive. On Pgs 29-30 of applicant's **REMARKS**, applicant asserts that Yeldener (Fig. 2B) the LPC filter is the synthesis filter of the decoder and is not related to shaping the spectrum of a noise sequence, wherein the noise spectrum is not shaped in relation to linear prediction filter coefficients. However Examiner asserts that Yeldener discloses in (Fig. 1 (10)) the spectral shaping unit which is affected by the LPC analysis (Fig. 1 (3, 4)) and wherein a white random noise spectrum is used for the shaped resultant excitation by the LPC filter to form the final synthesized speech signal (col. 3, lines 18-53, col. 4, lines 55-67 – col. 5, lines 1-9). Therefore the original rejection to claims 61, 62, 64 and 65 stands.

Claim Objections

1. Claims 71-74, 80-83, 90-92, 98-101, 108-110, 117-119 are objected to because of the following informalities:

a. Claims 71-74, 80-83, 90-92, 98-101, 108-110, 117-119 contain equations.

Examiner suggests applicant define all elements in all equations for clarification purposes.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 61, 62, 64, 65 are rejected under 35 U.S.C. 102(e) as being anticipated by Yeldener (US Patent 5,999,897).

(1) Yeldener discloses in (Fig. 1 (3, 4, 7, 8, 9, 10, 12, 13) and Fig. (2B)) a device for recovering a high frequency content of a wideband signal previously down-sampled and for injecting said high frequency synthesized version of said wideband signal to produce a full-spectrum synthesized wideband signal, said high-frequency content recovering device comprising: a random noise generator for producing a noise sequence having a given spectrum (col. 1, lines 59-64, col. 4, lines 55-67 – col. 5, lines 1-9); a spectral shaping unit (Fig. 1 (10)) for shaping the spectrum of the noise sequence in relation to linear prediction filter coefficients (Fig. 1 (3, 4), col. 4, lines 55-67) related to said down-sampled wideband signal and a signal injection circuit for infecting said spectrally-shaped noise sequence in said over-sampled synthesized signal version (Fig. 1, (12), col. 3, lines 1-67 – col. 4, lines 1-7) to thereby produce said

Art Unit: 2634

full-spectrum synthesized wideband signal (col. 1, lines 52-56, col. 2, lines 61-67, col. 3, lines 1-2, 18-58, col. 4, lines 55-67 - col. 5, lines 1-9).

(2) With regard to claim 62, claim 62 inherits all the limitations of claim 61.

Yeldener further discloses wherein said random noise generator is a random white noise generator for producing a white noise sequence having a flat spectrum over the entire frequency bandwidth of the wideband signal, whereby said spectral shaping unit produces a spectrally-shaped white noise sequence (col. 3, lines 1-2, col. 4, lines 8-11, 55-67).

(3) With regard to claim 64, claim 64 inherits all the limitations of claim 61.

(4) With regard to claim 65, claim 65 inherits all the limitations of claim 62.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 63, 66 and 121 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yeldener (US Patent 5,999,897) as applied to claims 61 and 62, in view of Iyengar et al. (US Patent 5,455,888).

(3) With regard to claim 63, claim 63 inherits all the limitations of claim 62.

However Yeldener does not disclose a gain adjustment module, responsive to said white noise sequence and a set of gain adjusting parameters, for producing a scaled white noise sequence; and a band-pass filter responsive to said filtered scaled white noise sequence for producing a band-pass filtered scaled white noise sequence to be subsequently injected in said over-sampled synthesized signal version as said spectrally-shaped white noise sequence.

However Iyengar et al. discloses in (Fig. 1) a gain adjustment module (12), responsive to said white noise sequence (Fig. 1 (16), Fig. 3 (68)) and a set of gain adjusting parameters, for producing a scaled white noise sequence (col. 5, lines 27-36, col. 7, lines 15-26, col. 8, lines 21-24); and a band-pass filter responsive to said filtered scaled white noise sequence for producing a band-pass filtered scaled white noise sequence to be subsequently injected in said over-sampled synthesized signal version as said spectrally-shaped white noise sequence (Fig. 1 (16, 22, 26), Fig. 2, Fig. 3 (68), abstract, col. 6, lines 64-66, col. 7, lines 1-12, 39-42, col. 8, lines 11-16, 17-24).

Therefore it would have been obvious to one of ordinary skill in the art to modify Yeldener in view of Iyengar et al to incorporate a gain adjustment module, responsive to said white noise sequence and a set of gain adjusting parameters, for producing a scaled white noise sequence; and a band-pass filter responsive to said filtered scaled white noise sequence for producing a band-pass filtered scaled white noise sequence to be subsequently injected in said over-sampled synthesized signal version as said spectrally-shaped white noise sequence in order to provide an artificial wideband

Art Unit: 2634

speech signal which is of better quality than a narrowband speech signal, without having to modify the existing network to actually carry the wideband speech (Iyengar et al., col. 2, lines 49-53).

(2) With regard to claim 66, claim 66 inherits all the limitations of claim 63.

(3) With regard to claim 121, claim 121 inherits all the limitations of claim 61.

Iyengar et al. further discloses in (Fig. 1) wherein said spectral shaping unit (12) comprises a spectral shaper for filtering the noise sequence in relation to a bandwidth expanded version of the linear prediction filter coefficients to produce a filtered noise sequence characterized by a frequency bandwidth generally higher than a frequency bandwidth of the over-sampled synthesized signal version (abstract, col. 3, lines 38-51).

Allowable Subject Matter

6. Claims 67-120, 122-128 are allowed.

7. The following is a statement of reasons for the indication of allowable subject matter: The instant application discloses a device for recovering a high frequency content of a wideband signal. Prior art references show similar methods but fail to teach **“a signal fragmenting device for receiving an encoded version of a wideband signal previously down-sampled during encoding and extracting from said encoded wideband signal version at least pitch codebook parameters, innovative codebook parameters, and linear prediction filter coefficients”**, as in claims 67, 76, 85, 94 and 112.

Conclusion

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cicely Ware whose telephone number is 571-272-3047. The examiner can normally be reached on Monday – Friday, 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jay Patel can be reached on 571-272-2988. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9314 for regular communications and 703-872-9314 for After Final communications.

Art Unit: 2634

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

Cicely Ware

cqw
March 1, 2006


KHAI TRAN
PRIMARY EXAMINER